

REMARKS

Claims 3, 4, 7, 9-11 and 16-22 are pending in this application. By this Amendment, claims 3, 4, 7, 9-11, 16, 19 and 20 are amended, and claims 1, 2, 5, 6, 8 and 12-15 are canceled without prejudice to or disclaimer of the subject matter set forth therein. Support for the amendments to claims 3, 4, 7, 9-11, 16, 19 and 20 can be found in the specification as originally filed, for example, at page 11, lines 1-19, and in claims 1-4, 7, 9-11, 16, 19 and 20 as originally filed. Thus, no new matter is added by these amendments.

The Office Action rejects claims 1-22 under 35 U.S.C. §102(b) over Japanese Patent Laid-Open Publication No. 2001000860 to Nakamura. Applicants respectfully traverse this rejection.

Independent claim 3 sets forth, in pertinent part, a "functional particle preparing method comprising steps of: treating either one of a hollow particle or a porous particle having a pore on the surface thereof by plasma irradiation under a reduced pressure, and graft polymerizing at least one type of monomer onto the surface of the plasma irradiated particle by contact between the at least one type of monomer and the surface of the plasma irradiated particle so as to substantially fill the pore of said particle with grafted polymers of said monomer; wherein during said plasma irradiation, plasma intensity and/or the degree of vacuum are controlled; during said contact with said monomer for graft polymerization, at least one of the requirements for monomer concentration, graft polymerization temperature, and graft polymerization time is adjusted to control graft polymerization yield of said grafted polymers; and a solution having an inclusion to be inserted into said particle is adjusted on a first condition that the grafted polymers substantially filling the pore of said functional particle is shrunk or hydrophilic; said functional particle is soaked in the solution having an inclusion which is adjusted on the first condition; said solution having an inclusion is adjusted on a second condition that the grafted polymers of the functional particle is

expanded or hydrophobic, and an inclusion-impregnated functional particle is separated from said solution having an inclusion." Independent claim 4 sets forth, in pertinent part, a "functional particle having graft polymerization yield of grafted polymers obtained from at least one type of monomer, the grafted polymers substantially filling a pore of said particle, is controlled by adjusting a reduced pressure, plasma intensity and/or the degree of vacuum while treating either one of a hollow particle or a porous particle having a pore on the surface thereof by plasma irradiation, and adjusting at least one of requirements for monomer concentration, graft polymerization temperature, and graft polymerization time while graft polymerizing the at least one type of monomer onto the surface of the plasma irradiated particle by contact between the at least one type of monomer and the surface of the plasma irradiated particle, wherein the functional particle is an inclusion-impregnated functional particle in which the pore and/or a cavity region of said functional particle are impregnated with an inclusion." Claims 7, 9-11, 16, 19 and 20 depend, directly or indirectly, from claim 3 or claim 4.

Nakamura is cited as allegedly disclosing a porous material that is treated with plasma prior to graft polymerization to decrease the diameter of the pores in the porous material. *See* Nakamura, Abstract. In particular, Nakamura discloses a porous gas-absorbing material that is exposed to a plasma atmosphere to enlarge the pore diameter based on the gas to be absorbed. *Id.*

In contrast to independent claims 3 and 4, Nakamura provides no suggestion of inclusion-impregnated particles or methods for producing them, and does not provide any suggestion or motivation to adapt its particles to contain inclusions. Rather, Nakamura merely discloses the use of porous functional particles for gas absorption. *See* Nakamura, Abstract. Thus, Nakamura does not disclose or suggest a functional particle that is an inclusion-impregnated functional particle, as set forth in claim 4, or a functional particle

preparing method in which an inclusion-impregnated functional particle is produced, as in claim 3.

Applicants respectfully submit that claims 3 and 4, and their dependent claims 7, 9-11, 16, 19 and 20, are patentable over Nakamura. Accordingly, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 3, 4, 7, 9-11, 16, 19 and 20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: October 29, 2004

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